

# Claims

[c1] I claim

1. An apparatus comprising a tray, a sleeve, and a frame that functions with a cook pot in two configurations, a first configuration being used for cooking in which the frame supports the tray and the cook pot, and the sleeve is positioned around the tray, the cook pot and the frame so that it functions as a windscreen and a heat reflector, and a second configuration in which the frame is wrapped around the cook pot, the tray and the sleeve, holding the cook pot, the tray and the sleeve together for storage.

[c2] 2. The apparatus of claim 1 having dimensions to function with a cook pot that is an empty beverage container.

[c3] 3. The apparatus of claim 2 having dimensions to function with a cook pot that is an empty 750ml aluminum beer can.

[c4] 4. The sleeve of claim 1, wherein the sleeve is a self supporting flexible cylindrical wall having an expandable opening to provide access to the tray for air and ignition

means in the first configuration.

- [c5] 5. The frame of claim 1 in which the frame comprises bent wire in a plurality of loops surrounding a central horizontal member smaller than the diameter of the cook pot with a plurality of protuberances that extend beyond the circumference of the cook pot.
- [c6] 6. The frame of claim 1 wherein the frame has a cylindrical wall and a horizontal support means at one end of the cylinder.
- [c7] 7. The frame of claim 6 wherein the cylindrical wall has an interior diameter larger than that of a cook pot allowing the lower portion of the cook pot to be enclosed within the frame.
- [c8] 8. The frame of claim 6 wherein the cylinder wall comprises a plurality of wire loops which apply a concentric force if spread apart.
- [c9] 9. The frame of claim 6 wherein the horizontal support means has an interior diameter smaller than that of a cook pot and wherein the horizontal support means has protuberances extending beyond the circumference of the cook pot through which a vertical suspension means of a tray may pass in one direction or another and on which the vertical suspension means of the tray may

rest.

- [c10] 10. The tray of claim 1 in which the vertical wall of the fuel tray comprise a plurality of loops that grasp the cook pot and rest on the frame in the second configuration.
- [c11] 11. The tray of claim 1 wherein the tray comprises a platform and vertical suspension means, wherein said platform allows solid or liquid fuel to be ignited below the cook pot in the first configuration.
- [c12] 12. The tray of claim 11 wherein the vertical suspension means grasp the bottom of a cook pot with a concentric force in the first and second configurations.
- [c13] 13. The tray of claim 12 wherein the vertical suspension means may slide upwards along the side of a cook pot to abut the platform to the bottom of the cook pot.
- [c14] 14. An apparatus comprising an insulating band, a tray, a sleeve, and a frame that functions with an empty beverage container to two configurations,
  - a first configuration being used for cooking in which the frame supports the tray and the beverage container, and the sleeve is positioned around the tray, the beverage container and the stand so that it functions as a windscreen and a heat reflector, and

a second configuration in which the insulating band is positioned around the top opening of the beverage container, and the frame is wrapped around the beverage container, the tray and the sleeve, holding the beverage container, the tray and the sleeve together for storage.

[c15] 15. An ultra-light, collapsible, soot-enclosing, wind-protected insulated backpacking stove for heating fluids contained within a lightweight vessel, the stove comprising:

a light weight vessel serving as a fluid container  
a flexible and moveable sleeve serving as a wind-screen during heating of the vessel, a thermal insulator during holding of the heated vessel and as a structural support of the vessel during transport,  
a collapsible heating tray serving as a holder of fuel and a thermal insulator during holding of the heated vessel, and

a lightweight and invertible frame serving as a support for the vessel above the tray during heating of the vessel and as a soot-encloser and a vessel mechanical support during transport.

[c16] 16. A stove as in Claim 15 , wherein the sleeve is a self supporting flexible cylindrical wall having an expandable opening to provide access to the tray for air and ignition

means in the first configuration and is stiffly clamped between the tray and the frame for rigidity in the second configuration.

[c17] 17. A stove as in Claim 15 , wherein the collapsible tray comprises an upper component and a lower component that can be arranged in either a first configuration or a second configuration,

wherein the first configuration is an extended position that supports the vessel substantially above the tray while heating, and

wherein the second configuration is a collapsed and nested position that positions the tray adjacent to the bottom of the vessel for providing insulation while holding heated vessel and for enclosing soot during transport.

[c18] 18. A stove as in Claim 15, wherein the invertible frame comprises an upper component and a lower component that can be arranged in either a first configuration or a second configuration,

wherein the first configuration is an stacked position that supports the vessel substantially above the tray while heating, and

wherein the second configuration is an inverted and nested position that encloses the vessel within the tray and the frame for providing insulation while

holding heated vessel and for enclosing soot during transport.

[c19] 19. A stove as in Claim 18 , the tray and frame components are made from wire with internal diameters for providing support in the first configuration and nesting in the second configuration.

[c20] 20. A method of stabilizing a cook pot, the method comprising  
first grasping the cook pot with a vertical suspension means of a tray in compression and  
in turn clamping the vertical suspension means of the tray into protuberances of a frame supporting the cook pot.

[c21] 21. A method of configuring an apparatus comprising a cook pot, a tray, a sleeve and a frame into a cooking configuration, comprising the following steps:  
placing the frame on a cooking surface,  
placing the tray onto the top of the frame so its fuel platform is located below the top of the frame,  
placing the cook pot on top of the frame, and  
wrapping the sleeve around the frame, tray and cook pot so that it functions as a windscreen.

[c22] 22. A method of configuring an apparatus comprising a

cook pot, a tray, a sleeve and a frame into a storage configuration, comprising the following steps:

sliding the tray over the bottom of the cook pot so that the fuel platform of the tray abuts the bottom of the cook pot,

wrapping the sleeve around the tray and cook pot, and

sliding the large end of the frame over the sleeve, tray, and cook pot effectively securing all the parts together.